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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,626	01/29/2004	Chang-Sin Park	P/923-373	6765
2352	7590	06/07/2005	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			VO, TUYET THI	
			ART UNIT	PAPER NUMBER
			2821	
DATE MAILED: 06/07/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/768,626

Applicant(s)

PARK, CHANG-SIN

Examiner

Tuyet Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 5 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: the Figure 3 shown in the drawing section is not described in the BRIEF DESCRIPTION OF THE DRAWINGS.

Appropriate correction is required.

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Shoda et al. (US Pat. 6,229,720), hereinafter Shoda.

Regarding claims 1 and 6, Shoda discloses an electrodeless lighting apparatus and method as well (Fig. 3a) using microwave comprising a PWM CONTROL CIRCUIT (3) for constantly maintaining voltage ( $V_2$ ) and current ( $i_{Me}$ ) applied to a magnetron of the electrodeless lighting apparatus by compensating a rate of variability of inputted AC voltage when oscillation current applied to a filament of the magnetron (col.7, lines 19-68) is varied due to a change of the inputted AC voltage (A, marked by examiner) via a sensing element (4).

Regarding claims 2-4, 7 and 8, Shoda discloses an electrodeless lighting apparatus and method as well (Fig. 3) using microwave comprising a power controlling unit (3, 4) for detecting

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a rate of variability of inputted AC power, and generating fixed AC voltage and current (B, marked by examiner) by compensating the detected rate of variability of the voltage, wherein a magnetron of the electrodeless lighting apparatus generates microwave based on the fixed AC voltage and current, wherein the fixed AC voltage is converted into high DC voltage by a high voltage transformer (T, C2, D5), and the converted high DC voltage ( $V_2$ ) is applied to the magnetron.

Regarding claim 9, Shoda discloses a method for controlling power of an electrodeless lighting apparatus (Fig. 3) using microwave comprising detecting a rate of variability of inputted AC voltage (A, marked by examiner) via a control/sensing circuit (3, 4), and generating fixed AC voltage and fixed oscillation current (B) by compensating the rate of variability of the voltage; and converting the fixed AC voltage (B) into high DC voltage ( $V_2$ ), and outputting the converted high DC voltage ( $V_2$ ), wherein a magnetron of the electrodeless lighting apparatus generates microwave based on the fixed oscillation current and the high DC voltage.

***Allowable Subject Matter***

4. Claims 5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior fails to establish a second transformer for converting a fixed AC voltage outputted from the inverting unit into a predetermined fixed voltage, wherein a high voltage transformer converts predetermined fixed voltage outputted from the second transformer into high DC voltage, and outputting the converted high DC voltage to the magnetron as required in claim 5 or the fixed AC voltage and the fixed oscillation current comprises converting inputted commercial AC power into DC power; detecting a rate of variability of voltage of the commercial AC power, and generating a voltage compensating signal for compensating the rate of variability of the voltage; converting the converted DC power into fixed AC power by varying a frequency of the converted DC power based on the voltage compensating signal; and converting the converted

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fixed AC power into predetermined fixed voltage and current, and applying the predetermined fixed voltage and current as converted to a filament of the magnetron as required in claim 10.

***Citation of pertinent prior art***

6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Ervin et al. (US Pat. 6,577,074) discloses a lighting system producing visible and UV light.

Bretmersky et al. (US Pat. 6,265,830) discloses apparatus and method for supplying a regulated current to a magnetron filament.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 571 272 1830. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Tuyet Vo

Primary Examiner

May 30, 2005